

RRRRRRRRRRRR		UUU	UUU	NNN	NNN	000000000	FFFFFFFFFFF	FFFFFFFFFFF
RRRRRRRRRRRR		UUU	UUU	NNN	NNN	000000000	FFFFFFFFFFF	FFFFFFFFFFF
RRRRRRRRRRRR		UUU	UUU	NNN	NNN	000000000	FFFFFFFFFFF	FFFFFFFFFFF
RRR	RRR	UUU	UUU	NNN	NNN	000	FFF	FFF
RRR	RRR	UUU	UUU	NNN	NNN	000	FFF	FFF
RRR	RRR	UUU	UUU	NNN	NNN	000	FFF	FFF
RRR	RRR	UUU	UUU	NNNNNN	NNN	000	FFF	FFF
RRR	RRR	UUU	UUU	NNNNNN	NNN	000	FFF	FFF
RRR	RRR	UUU	UUU	NNNNNN	NNN	000	FFF	FFF
RRRRRRRRRRRR		UUU	UUU	NNN	NNN	000	FFFFFFFFF	FFFFFFFFF
RRRRRRRRRRRR		UUU	UUU	NNN	NNN	000	FFFFFFFFF	FFFFFFFFF
RRRRRRRRRRRR		UUU	UUU	NNN	NNN	000	FFFFFFFFF	FFFFFFFFF
RRR	RRR	UUU	UUU	NNN	NNNNNN	000	FFF	FFF
RRR	RRR	UUU	UUU	NNN	NNNNNN	000	FFF	FFF
RRR	RRR	UUU	UUU	NNN	NNNNNN	000	FFF	FFF
RRR	RRR	UUU	UUU	NNN	NNN	000	FFF	FFF
RRR	RRR	UUU	UUU	NNN	NNN	000	FFF	FFF
RRR	RRR	UUU	UUU	NNN	NNN	000	FFF	FFF
RRR	RRR	UUU	UUU	NNN	NNN	000	FFF	FFF
RRR	RRR	UUUUUUUUUUUUUUUU	NNN	NNN	000000000	FFF	FFF	
RRR	RRR	UUUUUUUUUUUUUUUU	NNN	NNN	000000000	FFF	FFF	
RRR	RRR	UUUUUUUUUUUUUUUU	NNN	NNN	000000000	FFF	FFF	

```
PPPPPPPP  AAAAAA  RRRRRRRR  AAAAAA  GGGGGGGG
PPPPPPPP  AAAAAA  RRRRRRRR  AAAAAA  GGGGGGGG
PP        PP  AA      AA  RR      RR  AA      AA  GG
PP        PP  AA      AA  RR      RR  AA      AA  GG
PP        PP  AA      AA  RR      RR  AA      AA  GG
PP        PP  AA      AA  RR      RR  AA      AA  GG
PPPPPPPP  AA      AA  RRRRRRRR  AA      AA  GG
PPPPPPPP  AA      AA  RRRRRRRR  AA      AA  GG
PP        AA      AA  RR  RR      AAAAAAAA  GG  GGGGCG
PP        AAAAAAAA  RR  RR      AAAAAAAA  GG  GGGGGG
PP        AA      AA  RR      RR      AA      AA  GG  GG
PP        AA      AA  RR      RR      AA      AA  GG  GG
PP        AA      AA  RR      RR      AA      AA  GG
PP        AA      AA  RR      RR      AA      AA  GG
```

```
LL        IIIIII  SSSSSSSS
LL        IIIIII  SSSSSSSS
LL        II      SS
LL        II      SS
LL        II      SS
LL        II      SS
LL        II      SSSSSS
LL        II      SSSSSS
LL        II      SS
LL        II      SS
LL        II      SS
LL        II      SS
LLLLLLLLLL IIIIII  SSSSSSSS
LLLLLLLLLL IIIIII  SSSSSSSS
```



```
1 0001 0 MODULE parag ( IDENT = 'V04-000'
2 P 0002 0 %BLISS32C, ADDRESSING_MODE (EXTERNAL = long_relative,
3 0003 0 NONEXTERNAL = long_relative)]
4 0004 0 ) =
5 0005 1 BEGIN
6 0006 1
7 0007 1 *****
8 0008 1 *
9 0009 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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11 0011 1 * ALL RIGHTS RESERVED.
12 0012 1 *
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26 0026 1 *
27 0027 1 *
28 0028 1 *****
29 0029 1
30 0030 1 ++
31 0031 1 FACILITY: DSR (Digital Standard RUNOFF) / DSRPLUS
32 0032 1
33 0033 1 ABSTRACT:
34 0034 1
35 0035 1 Processes .PARAGRAPH, .SET PARAGRAPH, .(NO)AUTOPARAGRAPH,
36 0036 1 and .(NO)AUTOTABLE commands.
37 0037 1
38 0038 1 ENVIRONMENT: Transportable
39 0039 1
40 0040 1 AUTHOR: R.W.Friday CREATION DATE: June, 1978
41 0041 1
```


PARAG
V04-000

Revision History

C 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1 Page 2 (2)

:	43	0042	1	%SBTTL 'Revision History'
:	44	0043	1	
:	45	0044	1	MODIFIED BY:
:	46	0045	1	
:	47	0046	1	004 KAD00004 Keith Dawson 07-Mar-1983
:	48	0047	1	Global edit of all modules. Updated module names, idents,
:	49	0048	1	copyright dates. Changed require files to BLISS library.
:	50	0049	1	
:	51	0050	1	--

PARAG
V04-000

Module Level Declarations

D 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1 Page 3 (3)

```
.. 53      0051 1 %SBTTL 'Module Level Declarations'
.. 54      0052 1
.. 55      0053 1 : TABLE OF CONTENTS:
.. 56      0054 1
.. 57      0055 1 : INCLUDE FILES:
.. 58      0056 1
.. 59      0057 1
.. 60      0058 1 LIBRARY 'NXPORT:XPORT';      ! XPORT Library
.. 61      0059 1 REQUIRE 'REQ:RNODEF';      ! RUNOFF variant definitions
.. 62      0190 1
.. 63      U 0191 1 %IF DSRPLUS %THEN
.. 64      U 0192 1 LIBRARY 'REQ:DPLLIB';      ! DSRPLUS BLISS Library
.. 65      0193 1 %ELSE
.. 66      0194 1 LIBRARY 'REQ:DSRLIB';      ! DSR BLISS Library
.. 67      0195 1 %FI
.. 68      0196 1
.. 69      0197 1
.. 70      0198 1 : EXTERNAL REFERENCES:
.. 71      0199 1
.. 72      0200 1 EXTERNAL
.. 73      0201 1     gca      : gca_definition,
.. 74      0202 1     ira      : fixed_string,
.. 75      0203 1     nmlst    : number_list,
.. 76      0204 1     pdt      : ref pdt_definition,
.. 77      0205 1     sca      : sca_definition;
.. 78      0206 1
.. 79      0207 1 EXTERNAL LITERAL
.. 80      0208 1     rnfinm;
.. 81      0209 1
.. 82      0210 1 EXTERNAL ROUTINE
.. 83      0211 1     erma,
.. 84      0212 1     gcpos,
.. 85      0213 1     gcskip,
.. 86      0214 1     glnm,
.. 87      0215 1     gtpc,
.. 88      0216 1     outnj,
.. 89      0217 1     rskips;
```

! Error messages

PARAG
V04-000

Routine PARAG

E 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1 Page 4 (4)

```

: 91      0218 1 %SBTTL 'Routine PARAG'
: 92      0219 1 GLOBAL ROUTINE parag (handler_code) : NOVALUE =
: 93      0220 1
: 94      0221 1 !++
: 95      0222 1 FUNCTIONAL DESCRIPTION:
: 96      0223 1
: 97      0224 1     See the ABSTRACT, above.
: 98      0225 1
: 99      0226 1 FORMAL PARAMETERS:
100      0227 1
101      0228 1     handler_code - indicates the command to be processed.
102      0229 1     -1          - means set a pending paragraph.
103      0230 1
104      0231 1 IMPLICIT INPUTS:      None
105      0232 1
106      0233 1 IMPLICIT OUTPUTS:     None
107      0234 1
108      0235 1 ROUTINE VALUE:
109      0236 1 COMPLETION CODES:     None
110      0237 1
111      0238 1 SIDE EFFECTS:         None
112      0239 1 --
113      0240 1
114      0241 2 BEGIN
115      0242 2
116      0243 2 SELECTONE .handler_code OF
117      0244 2 SET
118      0245 2
119      0246 2     An autoparagraph was detected by pus.
120      0247 2
121      0248 2 [-1] :
122      0249 2 BEGIN
123      0250 2     outnj ();
124      0251 2
125      0252 2     Skip all spaces and tabs to get to text on line.
126      0253 2     This duplicates handling done by old RUNOFFs.
127      0254 2
128      0255 2     rskips (ira);
129      0256 2
130      0257 2     Always do the indentation.
131      0258 2
132      0259 2     sca_indent = .pdt_indent;
133      0260 2
134      0261 2     Pend the skipping only if this section is not empty.
135      0262 2
136      0263 2     sca_para_pnd = NOT .sca_sect_empty;
137      0264 2 END;
138      0265 2
139      0266 2 [h_autoparagraph] :
140      0267 2 BEGIN
141      0268 2     gca_autopara = true;
142      0269 2
143      0270 2     Disable .AUTOTABLE.
144      0271 2
145      0272 2     gca_autotabl = false;
146      0273 2 END;
147      0274 2
```

PARAG
V04-000

Routine PARAG

F 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1
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```
: 148      0275      2      [h_no_autotable, h_no_autoparagr] :  
: 149      0276      2      BEGIN  
: 150      0277      2      |  
: 151      0278      2      | Disable both .AUTOTABLE and .AUTOPARAGRAPH.  
: 152      0279      2      |  
: 153      0280      2      gca_autopara = false;  
: 154      0281      2      gca_autotabl = false;  
: 155      0282      2      END;  
: 156      0283      2      |  
: 157      0284      2      [h_autotable] :  
: 158      0285      2      BEGIN  
: 159      0286      2      gca_autotabl = true;  
: 160      0287      2      |  
: 161      0288      2      | Disable .AUTOPARAGRAPH.  
: 162      0289      2      |  
: 163      0290      2      gca_autopara = false;  
: 164      0291      2      END;  
: 165      0292      2      |  
: 166      0293      2      [h_paragraph, h_set_paragraph] :  
: 167      0294      2      BEGIN  
: 168      0295      2      |  
: 169      0296      2      | Get parameters.  
: 170      0297      2      |  
: 171      0298      2      glnm (3);  
: 172      0299      2      |  
: 173      0300      2      INCR I FROM 1 TO .nmlst_count DO  
: 174      0301      2      |  
: 175      0302      2      | IF .nmlst_descr (.i) EQL nm_bad  
: 176      0303      2      | THEN  
: 177      0304      2      | |  
: 178      0305      2      | | Ignore entire command if a single argument is bad.  
: 179      0306      2      | |  
: 180      0307      2      | | RETURN;  
: 181      0308      2      | |  
: 182      0309      2      | IF .nmlst_count GTR 0  
: 183      0310      2      | THEN  
: 184      0311      2      | |  
: 185      0312      2      | | User supplied at least one parameter.  
: 186      0313      2      | |  
: 187      0314      4      | BEGIN  
: 188      0315      4      | |  
: 189      0316      4      | | Use first argument as paragraph indentation,  
: 190      0317      4      | | if it was supplied.  
: 191      0318      4      | |  
: 192      0319      4      | | IF .nmlst_descr (1) NEQ nm_null  
: 193      0320      4      | | THEN  
: 194      0321      4      | | pdt_indent = .nmlst_value (1);  
: 195      0322      4      | |  
: 196      0323      4      | | IF .nmlst_count GTR 1  
: 197      0324      4      | | THEN  
: 198      0325      4      | | |  
: 199      0326      4      | | | IF .nmlst_descr (2) NEQ nm_null  
: 200      0327      4      | | | THEN  
: 201      0328      4      | | | pdt_skip = .nmlst_value (2);  
: 202      0329      4      | | |  
: 203      0330      4      | | Validate "paragraph test page" parameter.  
: 204      0331      4      | |
```


PARAG
V04-000

Routine PARAG

G 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[CRUNOFF.SRC]PARAG.BLI;1 Page 6 (4)

```

: 205      0332 4      IF .nmlst_count EQL 3
: 206      0333 4      THEN
: 207      0334 4
: 208      0335 4      IF .nmlst_descr (3) NEQ nm_null
: 209      0336 4      THEN
: 210      0337 4
: 211      0338 4      IF .nmlst_descr (3) EQL nm_unsigned
: 212      0339 4      THEN
: 213      0340 4      |
: 214      0341 4      |   If 3rd argument is unsigned, that is
: 215      0342 4      |   the test page value.
: 216      0343 4      |
: 217      0344 4      |   pdt_tp = .nmlst_value (3)
: 218      0345 4      ELSE
: 219      0346 4      |
: 220      0347 4      |   Validate 3rd argument if it is signed.
: 221      0348 4      |
: 222      0349 5      |   BEGIN
: 223      0350 5      |
: 224      0351 5      |   LOCAL
: 225      0352 5      |   temp;
: 226      0353 5      |
: 227      0354 5      |   |   Try out adjustment to current test page value.
: 228      0355 5      |   |
: 229      0356 5      |   |   temp = .pdt_tp + .nmlst_value (3);
: 230      0357 5      |
: 231      0358 5      |   IF .temp GEQ 0
: 232      0359 5      |   THEN
: 233      0360 5      |   |
: 234      0361 5      |   |   Save valid adjusted test page setting.
: 235      0362 5      |   |
: 236      0363 5      |   |   pdt_tp = .temp
: 237      0364 5      |   ELSE
: 238      0365 5      |   |
: 239      0366 5      |   |   Invalid test page specification.
: 240      0367 5      |   |   erma (rnfinm, false);
: 241      0368 5      |   |
: 242      0369 5      |   |
: 243      0370 4      |   END;
: 244      0371 4
: 245      0372 3      END;      ! End of parameter processing
: 246      0373 3
: 247      0374 3      IF .handler_code EQL h_set_paragraph
: 248      0375 3      THEN
: 249      0376 3      RETURN;
: 250      0377 3
: 251      0378 3      |
: 252      0379 3      |   Force out the vertical motion so that change bars don't get
: 253      0380 3      |   carried back too far.
: 254      0381 3      |
: 255      0382 3      |   outnj ();
: 256      0383 3      |   sca_indent = .pdt_indent;
: 257      0384 3      |
: 258      0385 3      |   |   Pend the skipping only if this section is not empty.
: 259      0386 3      |
: 260      0387 3      |   sca_para_pnd = NOT .sca_sect_empty;
: 261      0388 3
```



```

: 262          0389  2          END;
: 263          0390  2
: 264          0391  2          TES;
: 265          0392  2
: 266          0393  1          END;

```

! End of PARAG

```
.TITLE      PARAG
.IDENT      \V04-000\

.EXTRN      GCA, IRA, NMLST
.EXTRN      PDT, SCA, RNFINM
.EXTRN      ERMA, GCPOS, GCSKIP
.EXTRN      GLNM, GTPC, OUTNJ
.EXTRN      RSKIPS

.PSECT      $CODE$,NOWRT,2
```

HEX	DISP	OPCODE	REG	DATA	INSTR	COMMENT	PC
57	00000000G	EF	9E	00000	.ENTRY	PARAG, Save R2,R3,R4,R5,R6,R7	0219
56	00000000G	EF	9E	00002	MOVAB	OUTNJ, R7	
55	00000000G	EF	9E	00009	MOVAB	SCA+220, R6	
54	00000000G	EF	9E	00010	MOVAB	PDT, R5	
53	00000000G	EF	9E	00017	MOVAB	GCA+4, R4	
52	00000000G	EF	9E	0001E	MOVAB	NMLST+12, R3	
52	04	AC	D0	00025	MOVL	HANDLER_CODE, R2	0243
FFFFFFFFFF	8F	52	D1	00029	CMPL	R2, #-1	0248
		13	12	00030	BNEQ	1\$	
67		00	FB	00032	CALLS	#0, OUTNJ	0250
00000000G	EF	9F	00035	PUSHAB	IRA		0255
		01	FB	0003B	CALLS	#1, RSKIPS	
		00C5	31	00042	BRW	15\$	0259
03		52	D1	00045	CMPL	R2, #3	0266
		06	12	00048	BNEQ	2\$	
00	B4	01	D0	0004A	MOVL	#1, @GCA+4	0268
		15	11	0004E	BRB	4\$	0272
00000074	8F	52	D1	00050	CMPL	R2, #116	0275
		09	13	00057	BEQL	3\$	
00000076	8F	52	D1	00059	CMPL	R2, #118	
		07	12	00060	BNEQ	5\$	
	00	B4	D4	00062	CLRL	@GCA+4	0280
	08	B4	D4	00065	CLRL	@GCA+12	0281
		04		00068	RET		0243
05		52	D1	00069	CMPL	R2, #5	0284
		08	12	0006C	BNEQ	6\$	
08	B4	01	D0	0006E	MOVL	#1, @GCA+12	0286
	00	B4	D4	00072	CLRL	@GCA+4	0290
		04		00075	RET		0243
000000AA	8F	52	D1	00076	CMPL	R2, #170	0293
		0A	13	0007D	BEQL	7\$	
000000B9	8F	52	D1	0007F	CMPL	R2, #185	
		01	13	00086	BEQL	7\$	
		04		00088	RET		
00000000G	EF	03	DD	00089	PUSHL	#3	0298
		01	FB	0008B	CALLS	#1, GLNM	
	F4	A3	D0	00092	MOVL	NMLST, R1	0300
		50	D4	00096	CLRL	I	
		08	11	00098	BRB	9\$	

PARAG
V04-000

Routine PARAG

I 4
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14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1

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(4)

	04	0094	C340	D1	0009A	8\$:	CMPL	NMLST+160[I], #4	: 0302
			71	13	000A0		BEQL	16\$	:
F4	50		51	F3	000A2	9\$:	AOBLEQ	R1, 1, 8\$	: 0309
			51	D5	000A6		TSTL	R1	:
			54	15	000A8		BLEQ	14\$	: 0319
		0098	C3	D5	000AA		TSTL	NMLST+164	:
			05	13	000AE		BEQL	10\$	: 0321
00	B5	F8	A3	D0	000B0		MOVL	NMLST+4, @PDT	: 0323
	01		51	D1	000B5	10\$:	CMPL	R1, #1	:
			0E	15	000B8		BLEQ	11\$	: 0326
		009C	C3	D5	000BA		TSTL	NMLST+168	:
			08	13	000BE		BEQL	11\$	: 0327
	50		65	D0	000C0		MOVL	PDT, R0	: 0328
04	A0	FC	A3	D0	000C3		MOVL	NMLST+8, 4(R0)	: 0332
	03		51	D1	000C8	11\$:	CMPL	R1, #3	:
			31	12	000CB		BNEQ	14\$	: 0335
	51	00A0	C3	D0	000CD		MOVL	NMLST+172, R1	:
			2A	13	000D2		BEQL	14\$	: 0339
	50		65	D0	000D4		MOVL	PDT, R0	: 0338
	01		51	D1	000D7		CMPL	R1, #1	:
			06	12	000DA		BNEQ	12\$	: 0344
	08	A0	63	D0	000DC		MOVL	NMLST+12, 8(R0)	:
			1C	11	000E0		BRB	14\$	: 0356
51	08	A0	63	C1	000E2	12\$:	ADDL3	NMLST+12, 8(R0), TEMP	: 0358
			06	19	000E7		BLSS	13\$	: 0363
	08	A0	51	D0	000E9		MOVL	TEMP, 8(R0)	:
			0F	11	000ED		BRB	14\$	: 0368
			7E	D4	000EF	13\$:	CLRL	-(SP)	:
		00000000G	8F	DD	000F1		PUSHL	#RNF INM	: 0374
			02	FB	000F7		CALLS	#2, ERMA	:
00000000G	EF		52	D1	000FE	14\$:	CMPL	R2, #185	:
0000000B9	8F		0C	13	00105		BEQL	16\$	: 0382
	67		00	FB	00107		CALLS	#0, OUTNJ	: 0383
	66	00	B5	D0	0010A	15\$:	MOVL	@PDT, SCA+220	: 0387
04	A6	D8	A6	D2	0010E		MCOML	SCA+180, SCA+224	: 0393
			04	00113	16\$:		RET		:

; Routine Size: 276 bytes, Routine Base: \$CODE\$ + 0000

: 267 0394 1
: 268 0395 1 END
: 269 0396 0 ELUDOM

! End of module

PSECT SUMMARY

Name	Bytes	Attributes
\$CODE\$	276	NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

PARAG
V04-000

Routine PARAG

J 4
16-Sep-1984 01:26:39
14-Sep-1984 13:07:43

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[RUNOFF.SRC]PARAG.BLI;1 Page 9 (4)

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
-\$255\$DUA28:[SYSLIB]XPORT.L32;1	590	0	0	252	00:00.1
-\$255\$DUA28:[RUNOFF.SRC]DSRLIB.L32;1	1248	33	2	86	00:00.3

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS\$:PARAG/OBJ=OBJ\$:PARAG MSRC\$:PARAG/UPDATE=(ENH\$:PARAG)

: Size: 276 code + 0 data bytes
: Run Time: 00:06.7
: Elapsed Time: 00:20.7
: Lines/CPU Min: 3535
: Lexemes/CPU-Min: 18982
: Memory Used: 76 pages
: Compilation Complete

0347

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